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ABSTRACT

The effects of early childbearing on a woman's later social and economic status are examined in this paper. Previous research has documented an association of early motherhood with lower educational attainment, marital instability, higher subsequent fertility, and later economic poverty. However, these associations have not been tested in multivariate models of attainment that include important controls for social, economic, and motivational factors. Therefore, it is not clear whether the attainment of young women is inhibited by having a first birth at a young age, or whether the achievements of early childbearers are limited by personal and social characteristics other than age at first birth. The analyses summarized in this paper evaluate the attainment of approximately 5000 contemporary young American females as it is affected by the age when they bare their first child. In addition, the effect of the legitimacy status of the birth is evaluated. Quantified results and analytical discussion focus upon education; family size (fertility); marital stability; and occupational and income status. Additional foci include an examination of the relationship between female headed families, welfare dependency, and poverty. Some means are suggested by which the government, the schools, and other institutions could ameliorate the problems of high teenage fertility. (Author/GC)

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The Consequences of Early Childbearing: Research Summary

Results from the National Longitudinal Survey of Young Women (Parnes)

NICHD RFP 76-11 Contract
Number NO1-HD-62829

(Urban Institute Project Number 9-0999)

Report Prepared by
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PART I

Chapter One: Introduction

The fertility of teenagers has not declined as rapidly as the fertility of older women. Indeed, teens aged 15 and younger have actually had rising fertility rates in recent years. In addition, because of the large size of the post-War birth cohorts, the absolute number of births to teenagers and the proportion of all births that occur to teen mothers have risen. In 1975, young women under age 20 bore 19 percent of all children, 35 percent of all first children, and 52 percent of all out-of-wedlock children. Is this situation a cause for concern?

The focus of this research is an evaluation of the consequences of early childbearing for the later social and economic status of the mother. Previous research has documented an association of early motherhood with lower educational attainment, a higher probability of divorce among parents who marry, higher subsequent fertility, and with later economic poverty. However, these associations have not been tested in multivariate models of attainment that include important controls for social, economic, and motivational factors. Therefore, it is not clear whether the attainment of young women is inhibited by having a first birth at a young age or whether the achievements of early childbearers are limited by personal and social characteristics other than their age at first birth.

The analyses summarized here evaluate the attainment of approximately 5000 contemporary young American females as it is affected by the age when they bear their first child, net of background and contextual factors, such as race, family status, and region of residence. In addition, the effect of the legitimacy status of the birth is evaluated.

The young women studied were respondents in a national longitudinal survey commissioned by the U.S. Department of Labor. Respondents, who were all aged 14 to 24 at the time of the first interview in 1968, have been re-interviewed annually; data obtained through 1972 are included in the current analysis. Information on the educational, occupational, marital and family statuses of these young women has been obtained annually, providing an unusual opportunity to follow the important changes that occur in their lives as they mature.

Three research strategies have been employed in this study.

A. In the "attainment approach," respondents' attainment at ages 18, 21, and 24 is evaluated as a function of the mother's age at her first birth, both in simple tabular form and in a multivariate framework that includes extensive social, economic, and motivational controls. With this approach we examine the following outcomes: educational attainment, family size, marital instability, occupational prestige, hourly wage, annual earnings, household income, poverty, welfare dependency, and the probability of becoming a female family head.

B. In the "1968 to 1972 experience approach," respondents who are comparable in 1968 are followed through the years of the survey, and the impact of the woman's age at first birth on her status in 1972 is evaluated. This approach produces a measure of the changes in a young woman's statuses over the five years of the survey. Four outcomes are evaluated with this approach: marital instability; weeks worked between 1968 and 1972; occupational prestige in 1972; and household income and poverty in 1972.

C. The "transition probability approach" focuses on the likelihood of a change in respondents' lives in any given year, based on changes in other aspects of their lives. For example, how much more likely is it that a woman

who has just had a first birth will drop out of school by the end of the year, compared to a similar woman who does not have a first birth in that year? The four outcomes evaluated using this approach are school exit and re-entry; work exit and re-entry; public assistance exit and re-entry; and changes in marital status (marriage, divorce or separation, and remarriage).

Chapter Two: Education

Given the importance of education to later economic and social status, the years of schooling completed by young women is given special emphasis in this analysis. In a multiple regression controlling for family background status, demographic characteristics, and motivational factors, the age of a young woman at first birth was found to retain an important impact on educational attainment, over and above the effect of her other characteristics. For example, young women who bore their first child while 15 or younger completed about 1.4 fewer years of school by age 24 than did their peers who delayed motherhood until 16 or 17, and 1.9 fewer years than those waiting until 18 to have their first child. Educational attainment is also found to be enhanced by having relatively well-educated parents, a small and intact family of origin, parental encouragement, attendance in a college preparatory curriculum, and reading materials in the home.

An important second question that was explored is whether young women suffer an initial disadvantage due to an early birth but catch up over time. We find no evidence that young mothers catch up; indeed, they tend to fall further behind with passing years. The educational disadvantage of the youngest mothers compared to childless young women, is twice as large at age 24 as at age 18.

Additional analyses led to the conclusion that the process of educational attainment differs for early as opposed to later childbearers. The characteristics of the family of origin appear to be most important to the eventual

attainment of early childbearers, for example the father's education, number of siblings, and coming from an intact family -- factors that are believed to provide the resources necessary to overcome an untimely pregnancy. Among women bearing their first child at an older age, factors of personal motivation have a relatively greater effect on the years of schooling completed.

It was hypothesized that the consequences of an early birth might differ by race. Since teenage childbearing is so much more frequent among blacks, social mechanisms for handling a birth were argued to be better developed among blacks. Indeed, the educational loss is less for young black mothers. For example, blacks having a birth at age 15 or younger lose 1.4 years relative to their childless peers at age 24 compared with 3.1 years among whites.

Clearly the occurrence of an early birth has an important association with a reduction in educational attainment; but the causality is not clear. Among a sub-sample of young mothers for whom it is clear the birth occurred in the same or an earlier year than the termination of formal education, the argument for a causal role can be made more strongly. And among this sub-sample, the association between an early birth and less schooling is even stronger than in the larger sample.

Chapter Three: Family Size

Having begun family building at a young age, early childbearers are faced with many fertile years in which to bear additional children. Our expectation that women having a first birth at an early age would have significantly more children by age 24 received strong confirmation. Even controlling for race, age at marriage, family background status, legitimacy status of the first birth, and education, women having first births at age 15 or less had 1.3 more children by age 24 than women having a first birth at ages 21 to 23; women having a first birth

at 16 to 17 had 1.0 more child, while women with a first birth at age 18 had 0.6 more children. Overall, it was found that for each year a woman delays a first birth the number of children she will have by age 24 is decreased by about 12 percent. Therefore, whatever difficulties the young mother faces due to an early birth, it appears that they are soon compounded by rapid subsequent childbearing.

Respondents were also found to have larger families by age 24 if they were relatively poorly educated, black, had a first birth before or in the same year as their first marriage, and if they married young and did not experience marital disruption. In line with the secular decline in fertility, young women from more recent birth cohorts were found to have smaller families. Farm background and parental socioeconomic status were not found to affect the fertility of these contemporary young women.

Chapter Four: Divorce and Separation

The critical variable in predicting marital instability by age 24 was age at marriage rather than age at first birth. Early marriages were found to have far higher probabilities of disruption. The role of early childbearing here then appears to lie in its precipitation of youthful marriages, rather than in the fact of the early birth itself. Other variables that were found to be associated with a higher probability of marital disruption include being black, living on the Pacific Coast, and being from a more recent birth cohort (reflecting the societal trend toward more frequent divorce). AFDC benefit levels in the region of residence and parental socioeconomic status were not found to predict to marital disruption.

A second analysis followed respondents' marital statuses over the period of the survey. Again, a younger age at marriage was found to predict to greater instability between 1968 and 1972, while age at first birth did not. Both age at

marriage and duration of marriage were examined to evaluate whether it is the youthfulness of the partners or the duration of exposure to the risk of divorce that contributes to disruption; a young age at marriage appears to be the disposing factor. Other variables measuring the respondents' initial (1968) status that predict to divorce include a relatively low education (another route through which early childbearing may indirectly increase the likelihood of divorce or separation), being from a more recent birth cohort, and being black. In addition, couples in which husbands earn marginal incomes, wives work, and wives earn a high proportion of the total family income seem to face an elevated probability of divorce. Non-significant associations were observed between disruption and Pacific Coast residence, metropolitan residence, and coming from a non-intact family. Again, AFDC benefits in the region of residence were not found to predict to the probability of divorce.

Chapter Five: Occupational Prestige, Hourly Wage and Annual Earnings

Turning to the variables occupational prestige, hourly wage, and annual earnings, it was not expected that age at first birth would have a strong direct association with these attainment outcomes, but that the impact of an early birth would be transmitted through the young woman's reduced educational attainment and larger family size. Labor force experience, the other mediator, is not adequately measured in this data set (see summary of Chapter Seven). As expected, age at first birth is strongly related to occupational prestige, hourly wage, and annual earnings only when measures of educational attainment and family size are omitted from the equation. Education seems to be the critical factor in enhancing both job status and earnings.

Other variables affecting occupational prestige include the socioeconomic status of the respondent's parents and her race. Working less than full-time/full-year has only a small and non-significant association with job status.

Variables that increase hourly and annual earnings, in addition to education, include metropolitan residence, living outside the South, and working full-time/full-year. Interestingly the race of the respondent, her parent's socio-economic status, her own marital status and the size of her family's income without her paycheck were not found to be related to the level of her earnings.

Chapter Six: Female-Headed Families and Welfare Dependency

The proportion of all families that are female-headed has grown nearly ten times as rapidly as the proportion of two-parent families during the last several decades. In the mid-1970's, one in six children lived in female-headed families. Most of these families originate through divorce or the birth of an out-of-wedlock child. The frequency of this family type was examined to see what, if any, role early childbearing plays in its formation. The principal concern, however, is in the incidence of welfare dependency that is due to early childbearing. An analysis of female-headed families, the source of most public assistance cases, and an analysis of all mothers was therefore conducted.

Early childbearing was not found to be directly related to the probability of being either a female household head or a welfare recipient. However, age at marriage is an important predictor of marital instability, and both instability and the occurrence of a premarital birth predict to being a female family head at age 24 and to receiving welfare at age 24. These findings suggest an indirect role, since the majority of early births either precipitate marriages to legitimate the pregnancy or occur out-of-wedlock. Another important predictor of welfare dependency is low education, a frequent consequence of early childbearing.

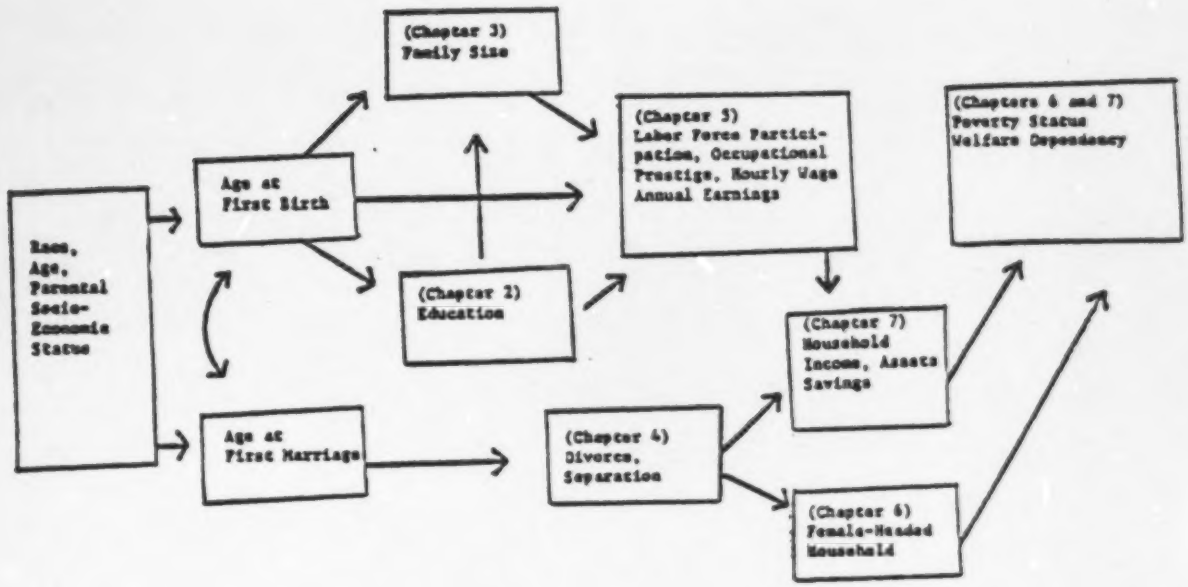
Although the level of AFDC benefits in the region of residence and the

local unemployment rate were not found to affect the probability of receipt of welfare among either analysis sample, a measure of the demand for female labor in the community of residence was significant, suggesting that good job opportunities tend to reduce welfare dependency. The probability of receiving public assistance was found to be higher among more recent birth cohorts, and among blacks.

Chapter Seven: Household Income and Poverty

Building on the previous analyses, in this chapter we proceed to an integrated analysis of all major outcomes. Utilizing an analytic technique known as path analysis we can compare the sizes of the direct and indirect effects of the age at which a woman has her first birth on later outcomes. In Figure 1 we can see, for example, that even though there is no "direct" effect (which would be represented by an arrow) leading from age at first birth to household income, age at first birth does have an effect, which we call "indirect," on household income. This is because the age at which a woman bears her first child has an effect (represented by an arrow) on total family size and on educational attainment, both of which affect the hours she works. Her labor force participation, in turn, affects her own earnings and her family's income. Thus the effect of age at first birth on household income is said to pass "indirectly" through education, family size, and labor force participation.

Figure 1:
Schematic Diagram of the Effects of Age at First Birth



In Figure 1, in addition to the arrow from age at first birth to educational attainment, we have also drawn an arrow <u>from</u> educational attainment <u>to</u> age at first birth. This represents our belief that not only does the age at which a woman bears her first child affect the number of years of schooling she will complete, but that her schooling affects the age at which she bears her first child. Thus, there are two distinctive patterns: (a) a first birth to a teenager precipitates dropping out of school; (b) dropping out of school for reasons other than pregnancy is nevertheless followed by pregnancy. (Of course, in some cases, it is impossible to sort out the causal order, since drop-out and the initiation of parenthood are truly simultaneous events.) In general, teenage mothers are considered to follow the first pattern, while older mothers tend to terminate their schooling

prior to becoming pregnant. Using these data to make a crude comparison of the age at first birth and age at termination of schooling among women who bore a child by age 27 does indicate that only among those women who had a first child while in high school does either pregnancy or childbearing precede school termination in a substantial number of cases. Most women 19 and over terminate their schooling before they have their first birth. Of those young women who bear a first child between 16 and 18, fully 70 percent drop our within one year of the birth of their first child, (in the previous year, the same year or in the year following), compared with fewer than one quarter of those who have a first birth between 19 and 21.[1] Failing to complete high school is especially critical for later life experience, since the average young woman is now at least a high school graduate.

Since we expect the effects of the age at which a woman bears her first child to be strongest among those who give birth at 18 or earlier, we divided our sample of women who had had a child by age 27 into two groups, those who had that first birth at 18 or earlier and those who had it between 18 and 27. We then examined the effects of age at first birth on the earnings of those women,on the earnings of the husbands or other contributor to household income,and on the poverty status of their households at age 27, in each sample. In order to make sure that the effects of an early birth were not confounded with early marriage, we controlled statistically for the effect of an early marriage in these analyses.

Age at First Birth and Educational Attainment - Overall Results

As expected, the effect of the age at which a woman has her first birth on educational attainment is very large among women who have first

1. The data available to us are not detailed enough to sort out effects of birth and pregnancy ontermination of schooling with any greater precision.

births while still in high school. Among these women the number of years of high school finished has no comparable effect on the age at which she bears that first child.

Among the women who have a first birth between 19 and 27, causality seems to run in both directions. Age at first birth affects years of schooling completed, and the years of schooling completed also affects age at first birth. As predicted, the latter effect is stronger.

The Effect of Age at First Birth Among Those Who Bear a First Child Before 19 - Detailed Results[1]

The effect of waiting one more year before having a first child can be substantial in money terms a few years later.

Effect On Own Income

For a woman who bears her first child at 18 or earlier, waiting one more year before a first birth has the effect of increasing her own earnings by $154 for each such year (1976 dollars).[2] This is due entirely to the additional 4/5 of a year of education that she can be expected to complete as a result of each year of delay.

Effect on Other Household Income

The most important effect, however, of waiting that additional year appears to be that for each such year a first birth is delayed, the income of her husband or other household provider at age 27 is increased by $1220.[3] Once again, this effect is due entirely to the 4/5 additional

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1. All effects in 1976 dollars.

2. This effect is small partially because women with no income are included in this sample.

3. This effect is reduced, though not eliminated when marital status is controlled. Thus it is partially but not entirely due to the greater propensity of the very earliest childbearers not to be married at 27.

year of education that she can be expected to complete, presumably because it increases the availability of and her attractiveness to husbands of higher earnings potential.

Effect on Total Household Income

The effect on total household income at 27 of delaying a birth is to increase it by$1374 ($1220 + $154) for each year that birth is delayed.[1]

Effect on Poverty

Because of the substantial size of its effect on household income, age at first birth has a large impact on the probability of the woman's household being in poverty at 27. For each year a woman delays a first birth, the probability of her household being in poverty at 27 is reduced by 2.7 percentage points. Since the average proportion of this sample in poverty is 12 percent, this would mean a reduction of 23 percent for each year a birth is delayed,a substantial reduction. Again, this effect is due entirely to the additional 4/5 year of school a young woman will be able to complete if her first birth occurs at 16. for example, instead of at 15.

The Effect of Age at First Birth Among Those Who Bear a First Child at 19 or Later - Detailed Results[2]

Effect On Own Income

Total Effect.--In this sample of later childbearers the total effect of waiting one year before having a first child is very small, only $16 for each year a birth is delayed, because the different indirect effects affect later income in opposite directions. The separate positive and negative effects which, when summed, form the total effect are the following.

1. These effects may be conservative because women with missing data had to be excluded from the analysis, and those excluded tended to have lower educations and lower incomes.

2. All effects in 1976 dollars.

The Positive Effect Through Education.--Compared to a woman of the same age who has a first child, the woman who postpones that child can expect at age 27 to earn $72 more for each year she postpones the birth. This is because she will obtain a small amount of additional education (about one-fifth of a year), which will increase her labor force participation and, her own earnings.

The Positive Effect Through Family Size.-- Because she will have fewer children, she can also expect to work more hours, which will increase her earnings at age 27 by $364 for each year she postpones the first birth.

The Negative Effect Through Labor Force Participation.--However, at age 27 the woman who postpones a first birth will earn $420 less for each year of delay, because older childbearers were found to work fewer hours during the last year.[1]

Effect On Other Household Income

In this sample, being one year older at first birth has no effect at all on other household income (whether husband's, other relative's or non-relative's) at age 27.

Effect On Poverty

The effect of being one year older at first birth on the probability of being in poverty at age 27 is to reduce it by 1.4 percentage points or by about 16 percent. The largest indirect effect is due to the effect of age at first birth on family size. Being a year older at first birth reduces the proportion in poverty by 1.3 percentage points for every year a first birth is delayed because family size is reduced by about one-fifth.

[1]This effect is not changed by a control for the presence of a child under 3. Therefore it is not due to a difference between early and later childbearers in the presence of a young child.

Summary

The effect of delaying first births among early childbearers is clearly very large in dollar terms. For each year a high school student can postpone her first birth, she can expect to complete, on the average 4/5 years of further schooling. By age 27, this schooling will raise her earnings by $154 for each year of delay. In addition, other earners in her household will contribute $1220 more, for each year of delay. This cumulates to a household that is better off by $1374. Put another way, the probability that her household will be in poverty is reduced by 2.7 percentage points for each year of delay in a sample in which the average percent in poverty is 12.0. Therefore, if teenage childbearing can be delayed in favor of further education, the economic advantages and associated non-economic advantages, to the individual, her family, and society, appear to be substantial.

PART II

The Impact of First Birth on Major Life Changes of Young Women

In the yearly transition approach the probability of experiencing changes in marital status, school enrollment status, work force status, and public assistance status as a result of having a first child in the current or previous year was explored.

A. Impact of a First Birth on Changes in Marital Status

About 12 percent of our sample of women married in a given year. In the year a first birth occurs to a never married woman, she experiences dramatically higher first marriage probabilities (such that half of all single women who give birth marry). If she remains single, she still experiences slightly higher rates in successive years. The net effect of a first birth to a single woman is to considerably accelerate the pace of first marriage and thereby the likelihood of ever marrying.

If a first birth occurs to a married woman (as most do), the probability of divorce or separation is very substantially reduced for a year or two (from 7 percent to roughly 2 percent). However, if the woman is under 18, her marital instability is increased. Second or later births, however, lead to a greater probability of divorce or separation in both the first and following years.

Of those divorced or separated, 40 percent remarried in a given year. If a first birth occurs to a woman who is divorced or separated, the probability of remarriage is raised in the first year (about half marry within a year after the birth), unchanged in the second year and reduced in the third year. For a second or later birth, the remarriage probability is reduced in both second and third years (about one-third marry).

B. Impact of a First Birth on School Exit and Re-entry

The effect of a first birth on school exit is consistent across all levels of school. That is, a first birth in the current year increases substantially the probability of dropping out, whether the woman is in high school, between high school and college, in college, or between college and graduate school. It does not appear to increase the probability of dropping out of graduate school. However, the impact of a first birth depends greatly on the marital status of the woman. A first birth is much more likely to result in termination of schooling if the woman is married at the time or marries in the same year. If she does not marry the chances she will drop out of school are either increased only slightly or not at all.

Among girls in tenth grade, marriage and a birth in the same year raise the probability of dropping out from 10 percent for those who remain childless and unmarried to 77 percent. Among high school graduates, 48 percent do not continue on to college. However, nearly twice as many (80 percent) who have a marriage and a first birth in a given year do not enter college. Among college women, the chance of dropping out in any given year is 20 percent. Of those who have both a marriage and a first birth, 73 percent do not continue. Following college graduation, 70 percent of all women do not continue. A first birth and a first marriage increase slightly the probability of dropping out. At the graduate school level, marriage alone raises the probability that a woman will drop out.

Thus it appears that it is marriage, more than a first birth that pulls women out of school at all levels, though the effects of both are highly correlated. The effects of a first birth and a first marriage are strongest

at the lower schooling levels, i.e., among younger women. One year after it occurs, a first birth still exerts pressure toward higher school drop-out rates, but after two years there is no discernible impact among those still enrolled.

Childbearing and marriage deter reentry in much the same way they encourage exit. It appears that early childbearers do not catch up with their non-childbearing peers. At least up to age 26, dropping out of school due to marriage and/or childbearing is not reversed by a high re-entry rate later on.

C. Impact of a First Birth on Work Entry and Exit

A woman's first birth directly affects her work entry probability, the hours she works given that she begins work, and the probability of exit after she begins work. Twenty-five percent of married women begin work in a given year. A first birth exerts particularly strong pressure on a married woman not to begin work (only 12 percent do) and that pressure continues in reduced degree for several years after the birth. Forty-five percent of unmarried women enter the work force in a given year. An unmarried woman typically does not reduce her work entry probability so drastically in response to a current year first birth, although the entry rate is reduced (30 percent of these women begin work in a given year). Moreover, unmarried women seem to have above-normal entry rates in the year after the birth (60 percent enter in the following year), so that any deficit in new entrants appears to be eliminated. For married women a first birth seems to induce long-lasting delays in work entry; for unmarried women a first birth seems only to delay entry for one year.

For new entrants to work, hours worked are strongly reduced by a current first birth. For married women, the downward pressure continues in small measure

after the first year. Since better educated women tend to work more hours, and since first birth coupled with marriage leads to school drop-out, a first birth coupled with a marriage which truncates educational attainment is also likely to truncate hours worked for new entrants.

About 20 percent of women, married or unmarried, leave the labor force in a given year. Work exits are increased by a first birth in a similar manner for married and unmarried women by about 20 percent. The effect seems relatively short-lived. Once women have been working they seem to resist stopping more than non-working women resist starting.

D. Impact of a First Birth on Entry Onto and Exit From Public Assistance

Only 4 percent of all women go onto public assistance in a given year; 40 percent of those enrolled exit.[1] Premarital first births strongly propel women onto public assistance (23 percent of women who experience a premarital first birth go onto public assistance in the same year) and reduce their chances of leaving to almost zero. Postmarital first births exert only very slight pressures on entry and exit. The pressure of a first birth on entry and exit persists for a few years, but in very reduced magnitude. There are numerous indirect effects, such as through dropping out of the work force, which is associated with an increased chance of public assistance entry. A first birth accompanied by a marriage increases the probability of exit from public assistance (58 percent leave in a year).

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1. The variable used is actually whether or not anyone in the household is receiving public assistance of any kind.

Discussion and Conclusions

What then is the impact of early childbearing on the life of a woman, and by inevitable extrapolation, on the life of the child she bears? The issue is not as simple or direct as it first appeared. An early first birth does seem to limit the schooling a young woman completes and to increase the number of children she bears. On the other hand, age at first birth has no direct effect on other critical outcomes at age 24, including marital disruption, welfare recipiency, occupational prestige, or hourly and annual earnings. The impact of an early birth does affect these later outcomes, however -- through its impact on education and fertility. Less well-educated women not only earn less at less prestigious jobs and depend on welfare more often, they also experience marital instability more frequently. A larger family size reduces women's labor force participation and causes available resources to be stretched more thinly.

However, these conclusions must be tempered by several additional caveats. First of all, we emphasize that the women studied here are very young and so their final status is not determined. While we feel fairly confident in drawing conclusions about the years of schooling completed by early- relative to later-childbearers, we have somewhat less confidence in our conclusions concerning completed family size. Nor do we expect the labor force participation and household incomes of a group of women still under 30 to be settled. In addition, for statistical reasons, women still childless at 27 in the respective analyses, could not be included in the path model. Therefore, the comparisons are somewhat more limited than in real life. Furthermore, due to their limited range of ages, the fact that early childbearers were young at first birth is confounded with the fact that when they are 27 their children will be more mature than those of later childbearers. For these

reasons, conclusions based on such a young sample must be tempered. However, it is necessary to study contemporary women. Evaluating the longer-term consequences necessarily involves a sample of older and less contemporary adults. Each approach has advantages and disadvantages; combining the two approaches should produce the fullest picture.

Second, we have not been entirely successful in disentangling the effects of early childbearing from those of early marriage. The variables are highly correlated (+.90); however, because of their close association, especially among the youngest women, we may never be able to disentangle the effects completely. It does appear, though, that age at first birth affects family building, while the age at which a woman marries appears to be more important to later marital instability than the age at which she bears a first child.

Third, most of the young women in our sample completed their schooling before having their first child. In addition, then, to pregnancies that occur among schoolgirls for lack of knowledge and contraception, and which force them to discontinue schooling, it is probable that many pregnancies among young women already out of school result from lack of attractive alternatives to early childbearing. For these young women age at first birth has no known effect on educational attainment; rather, educational attainment affects age at first birth. This too is an interesting finding. Why is formal education so unappealing that teenagers drop out even though they are not pregnant? More relevant educational programs and greater employment opportunities might provide viable alternatives to early childbearing. This is not to ignore the importance of those high school students whose unintended first pregnancy or birth precipitates school dropout, a significant loss of schooling, and substantial economic disadvantages. The different motivations and needs of these two groups should be recognized.

The transition analyses reported in Part II verify the important effect that a birth has on all women (and presumably on their men) regardless of their ages. Women who bear a child tend also during the same year to drop out of school, quit their jobs, and go on public assistance. This effect is even stronger if they marry in the same year, which they are likely to do. They typically do not return to school in sufficient numbers to compensate for the effect of an untimely birth, though they do enter or re-enter the labor force sooner or later. The effects of these annual transitions are documented in the attainment analyses. Although childbearing may tend to have the same impact on all women, the meaning of quitting school is very different in tenth grade compared to college. And the effect of quitting work is very different for a teenager who hastily marries her high school sweetheart relative to a married woman in her twenties with the credentials necessary for job advancement. Thus we suspect that over the long run she will be less well off than her later-bearing sister. Campbell's remark, which is so frequently quoted, is, then, essentially correct:

> The girl who has an illegitimate child at the age of 16 suddenly has 90 percent of her life's script written for her. She will probably drop out of school; even if someone else in her family helps to take care of the baby, she will probably not be able to find a steady job that pays enough to provide for herself and her child; she may feel impelled to marry someone she might not otherwise have chosen. Her life choices are few, and most of them are bad. Had she been able to delay the first child, her prospects might have been quite different, assuming that she would have had opportunities to continue her education, improve her vocational skills, find a job, marry someone she wanted to marry, and have a child when she and her husband were ready for it (Campbell, 1968).

However, it is not at all clear that the young woman has or must have 90 percent of her life's script decided. The very complexity of the process provides multiple points of intervention—many points for government as well as parents, schools, and other institutions:

1. Prevention of the pregnancy, through provision of contraceptive counseling and services, sex education, and parenting education, beginning at adolescence and before.

2. The means to terminate a pregnancy early on if that is a strong wish or necessity for the young woman.

3. Counseling and assistance that would enable the young mother to avoid a marriage entered into solely because no alternatives are perceived. On the other hand, a desired marriage should not be discouraged by the unavailability of such public assistance as that provided by the unemployed father program. Provision of adequate and inexpensive day care would allow her to work outside the home.

4. Help in completion of her education, if she does have a child at an early age. More innovative educational programs may encourage the young mother to stay in school. Day care would allow her to do so. Technical or vocational training might prove useful for those who have been unsuccessful students prior to the birth.

5. Help with prevention of additional unwanted childbearing, again through contraceptive counseling and services.

6. Better labor market opportunities and increased flexibility of work schedules, so that it is neither necessary nor attractive to resort to public assistance.

For those women whose childbearing follows rather than precipitates the termination of schooling, the policy implications of our model differ somewhat. At issue, in addition to the prevention of unwanted births, is the provision of means of satisfaction alternative to childbearing and rearing. Such a goal can be achieved, and therefore, early childbearing prevented, through:

7. Making schooling more attractive to young women, thus keeping them in school

longer, and

8. Providing meaningful and attractive employment opportunities.

The critical issues seem to be ones of choice, equal opportunity, and the welfare of the children. Do women enter motherhood at an early age out of choice? Do all women have the opportunity to avoid early parenthood, to acquire the skills for self-support and to lead a satisfying life, whether or not they are parents? And, are they prepared economically, educationally, and emotionally to assume the burdens of parenthood while yet teenagers? The consequences of early childbearing appear to be sufficiently negative that we doubt it is a status normally entered by choice, characterized by equal opportunity, or beneficial to children. Therefore, it seems important to weight the costs of early childbearing documented here, both direct and indirect, against the costs of intervening to prevent increasing proportion of United States children to be born to teenagers.

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Copies of the full report are available at a charge of $10.50 to cover xeroxing from Kristin A. Moore, The Urban Institute, 2100 M Street, N.W., Washington, D.C. 20037.